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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/612,798	07/02/2003	Gesine Arends	2493 A	5336

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EXAMINER

PATEL, VINIT H

ART UNIT PAPER NUMBER

1764

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/612,798

Applicant(s)

ARENDT ET AL.

Examiner

Vinit H. Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 02 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 10/396,144.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 23Oct03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-3, 5, and 7-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Vogel et al., DE 19721630 C1.

Regarding claims 1-3, Vogel teaches a reforming apparatus comprising burners b having a heating element, and a two-part reforming reactor, having reactors c and d (Fig. 1; C6/L58-C7/L38). Furthermore, the manner of operating a device does not distinguish the device from the prior art. See MPEP 2114.

Regarding claim 5, Vogel teaches burner b has orifice plates (apportioning elements) at the inlet and outlet ends for uniform distribution of temperature along the burner surfaces (Fig. 1; C6/L58-C7/L38).

Regarding claim 7, Vogel teaches the two-part reforming reactor, having reactors c and d are coaxial one another (Fig. 1).

Regarding claim 8, Vogel teaches the burner b and two-part reforming reactor, having reactors c and d are coaxial one another (Fig. 1).

Regarding claim 9, Vogel teaches the burner b is arranged approximately central the reactors c and d and the heating elements (Fig. 1).

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Regarding claim 10, Vogel teaches a reforming apparatus useful in fuel cells (C1/L1-C2/L1), comprising burners b having a heating element, and a two-part reforming reactor, having reactors c and d (Fig. 1; C6/L58-C7/L38). Furthermore, the manner of operating a device does not distinguish the device from the prior art. See MPEP 2114.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vogel et al., DE 19721630 C1.

Regarding claim 4, Vogel teaches all of the limitations as applied to claim 3 above, but does not explicitly teach the heating element disposed between the first and second reactor. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Vogel by moving the location of the burner heating elements as such a change is a mere rearrangement of parts to provide more efficient heat exchange within the reactor. See In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950).

Regarding claim 6, Vogel teaches all of the limitations as applied to claim 5 above. Vogel does not explicitly teach the orifice plates (apportioning elements) are controlled by a controlling unit, but teaches that burner emission is controlled to

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maintain efficiency (C1/L1-C2/L1), therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Vogel to include a controlling unit for the purpose to provide more precise burner emission control.

3. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vogel et al., DE 19721630 C1, in view of Autenrieth et al., US Patent No. 6,432,378.

Regarding claim 11, Vogel teaches all of the limitations as applied to claim 10 above, but does not explicitly teach the fuel cell may be used in a motor vehicle.

Autenrieth teaches that fuel cell may be used in motor vehicles and it would have been obvious to one ordinary skill in the art to modify Vogel to be used in the a motor vehicle for the purpose to provide a fuel cell/hydrogen generating apparatus with less complex machinery and a low amount of heat loss (C1/L1-C2/L1).

### ***Double Patenting***

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

4. Claims 1-11 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-11 of copending Application No. 10/396,144. This is a

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provisional double patenting rejection since the conflicting claims have not in fact been patented.


**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vinit H. Patel whose telephone number is (571) 272-0856. The examiner can normally be reached on 9:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
VHP

  
Glenn Caldarola  
Supervisory Patent Examiner  
Technology Center 1700